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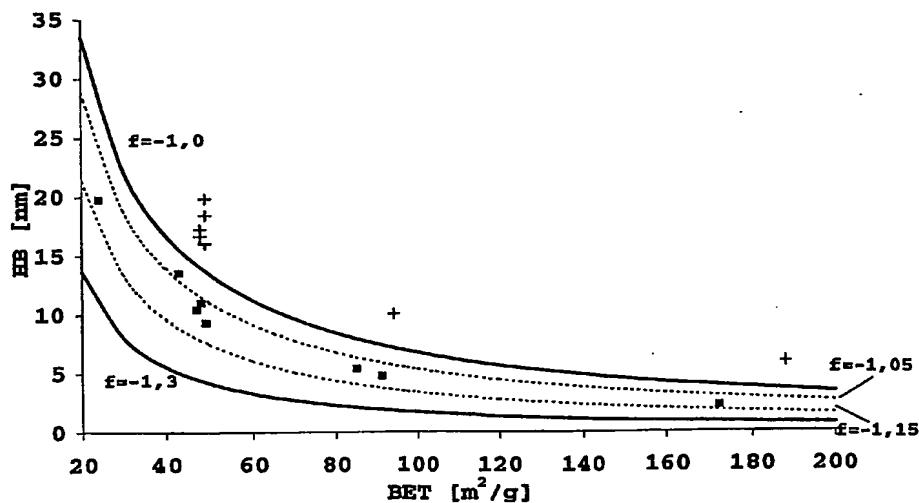
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(54) Title: FLAME-HYDROLYTICALLY PRODUCED TITANIUM DIOXIDE POWDER



(57) Abstract: Flame-hydrolytically produced titanium dioxide powder that is present in the form of aggregates of primary particles, and has a BET surface of 20 to 200 m^2/g , a half width (HW) [nm] of the primary particle distribution of $\text{HW} = \text{a} \times \text{BET}^f$ where $\text{a} = 670 \times 10^{-9} \text{ m}^3/\text{g}$ and $-1.3 \leq f \leq -1.0$ and the proportion of particles with a diameter of more than 45 μm lies in a range from 0.0001 to 0.05 wt.%. The powder is produced by a process in which a titanium halide is vapourised at temperatures of less than 200°C, the vapours are transferred to a mixing chamber by means of a carrier gas of defined moisture content and, separately from this, hydrogen, primary air, which may optionally be enriched with oxygen and/or preheated, and steam are added to the mixing chamber, following which the reaction mixture is combusted in a reaction chamber sealed from the ambient air, secondary air is in addition introduced into the reaction chamber, the solid is then separated from gaseous substances, and following this the solid is treated with steam. The titanium dioxide powder may be used for the heat stabilisation of polymers.

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